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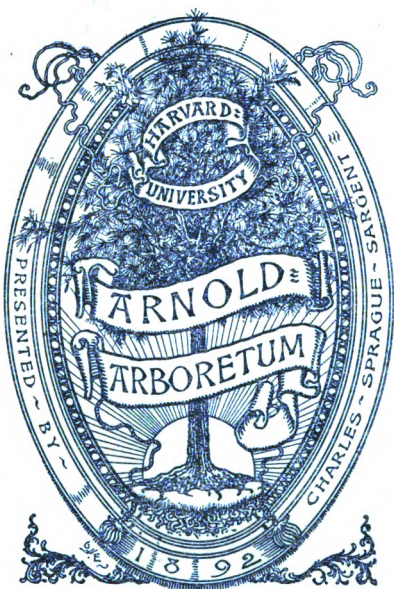
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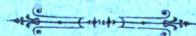


On Charred Pine-wood from  
Dorset Peat Mosses.

BY

CLEMENT REID, F.L.S., F.G.S.

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On Charred Pine-wood from Dorset Peat  
Mosses.



## On Charred Pine-wood from Dorset Peat Mosses.

By CLEMENT REID, F.L.S., F.G.S.

*Read December 10th, 1894.*



PEAT-MOSSES in the south of England often yield remains of the common pine. This tree, however, does not seem to have grown there within the historic period, except where planted ; and it is only within the last hundred years that it has again become abundant. The destruction by fire of the pine forests which formerly clothed extensive districts is often alluded to by archæologists. Their description of the half-burnt pine-wood found under peat-mosses is sometimes most exact, and till recently I should not have thought of doubting the accuracy of those observations. During a stay last autumn (1893) at Parkstone I had occasion, however, to examine some sections through a peat-moss exposed in the new reservoirs of the Poole Waterworks. Some feet down in the peat, and usually close to the base of the deposit, lay several logs of pine-wood. The excavation was, unfortunately, nearly finished when first visited, but it was still possible to examine some of the logs in place ; and smaller pieces of wood mingled with occasional fir-cones were to be

found among the material thrown out. Every piece of pine-wood was more or less charred externally, as if by fire. This seemed, of course, to corroborate the common idea of the destruction of the trees by burning; but on closer examination I was struck by the curiously partial way in which the charring had affected the wood. One large log, exposed in the bottom of a drain and still partially imbedded in the peat, was charred on every side, and the knots stood out just as they do in a pile that has long been exposed to the action of the sea. This is not at all what one would expect in the case of burning, for the knots are saturated with turpentine and are exceptionally inflammable. It was very singular also that every fragment of pine-wood—and probably nearly a hundred were examined—showed more or less charring and that, on the other hand, the fragments belonging to other trees were untouched by fire.

It was impossible properly to locate the various loose fragments of wood scattered about, but the examination of portions of the matrix adhering to them showed that the uncharred pine-wood had been imbedded in a sandy soil like that still to be seen lying beneath the moss. The charred surfaces, on the contrary, were always more or less penetrated by peaty fibres, and had evidently been imbedded in peat. In a few cases one end of a root or log was charred, the other being uninjured. The charred portion had projected up into the peat; the unaltered part had always been imbedded in the ancient soil. This might seem to support the established view that the peat began to grow directly the drainage was stopped by the burning and fall of the trees. But against this I must point out that the fir-cones, though carbonised, are certainly not charred, and the same is the case with the wood not belonging to pine. It is impossible without further evidence to speak confidently on this question, but I should like to suggest that the pine-wood has not been attacked by fire, but that when imbedded in growing peat it becomes slowly turned into charcoal, the parts surrounded by clay or sand remaining comparatively unaltered.

Forest-fires often occur in the pine-woods near Bournemouth and Parkstone, and one has abundant opportunities for studying their



effects. One thing is particularly noticeable—that the fire never lasts sufficiently long to penetrate the bark of the larger trees. The leaves, twigs, and undergrowth are burnt and the bark to a certain extent is charred; but the wood beneath is merely scorched sufficiently to destroy the vitality of the tree. The destruction of the pine-trees found in peat-mosses cannot therefore be due to ordinary fires.

It might be suggested that the logs found are the remains of fires made by neolithic man. But to this explanation there is the objection that a savage would not usually build a fire of logs five feet or more in length; for some logs charred from end to end are as long as that. It is also obvious that in the case of burning the knots would be charred at least as quickly as the rest of the log and would not be left projecting. The cause of the destruction of the ancient pine forests of the south of England is still unknown, though it may be connected with bygone climatic changes.

It will also now be necessary to examine more critically the evidence on which has been founded the supposed destruction of many of the old pile-dwellings by fire. The artificial piles also may have been slowly carbonised and destroyed while imbedded in the growing peat, though in certain cases fire was undoubtedly the agency that destroyed these settlements.











